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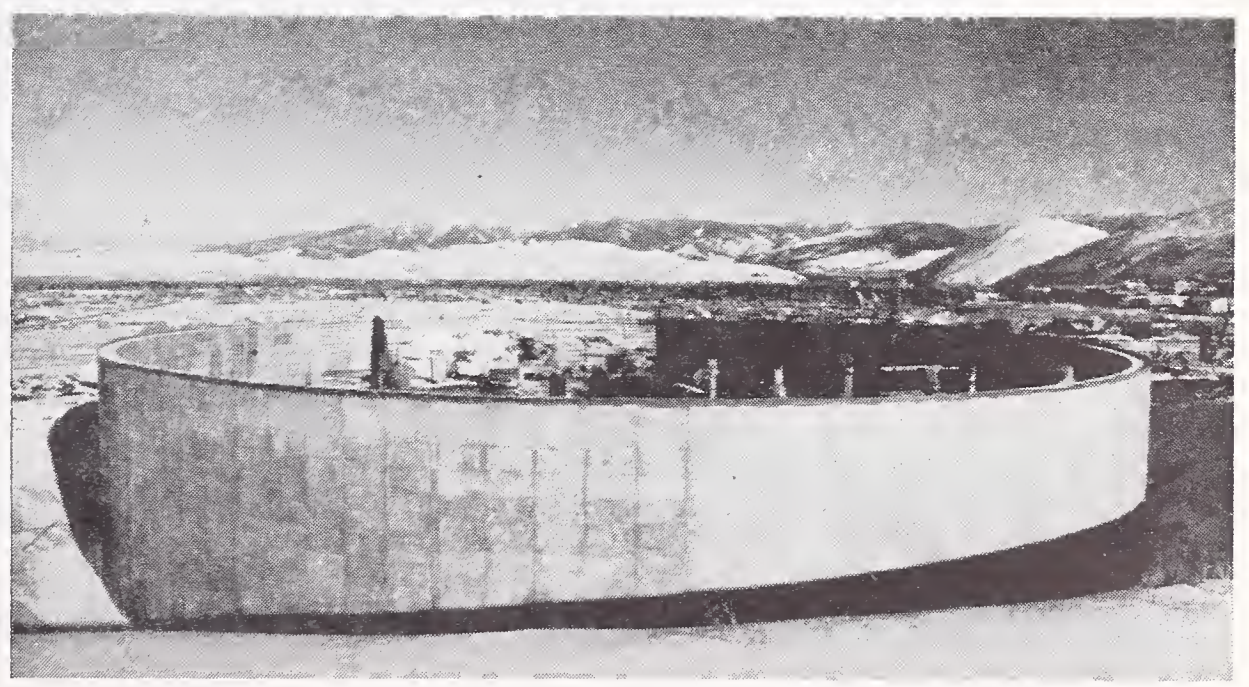
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MSAWWA — MWPCA CONFERENCE

Volume IX

March, 1979

No.1



Three-million Gallon Underground Concrete Water Storage Facility
Under Construction at Missoula, Montana
COVER STORY — PAGE 16

CONFERENCE — — — — — MISSOULA — — — — — MARCH 29-30

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BIG SKY CLEARWATER

Bulletin of the MSAWWA-MWPCA Conference
 Volume IX (No. 1) March, 1979
 Quarterly Publication Established 1971
 Billings, Montana



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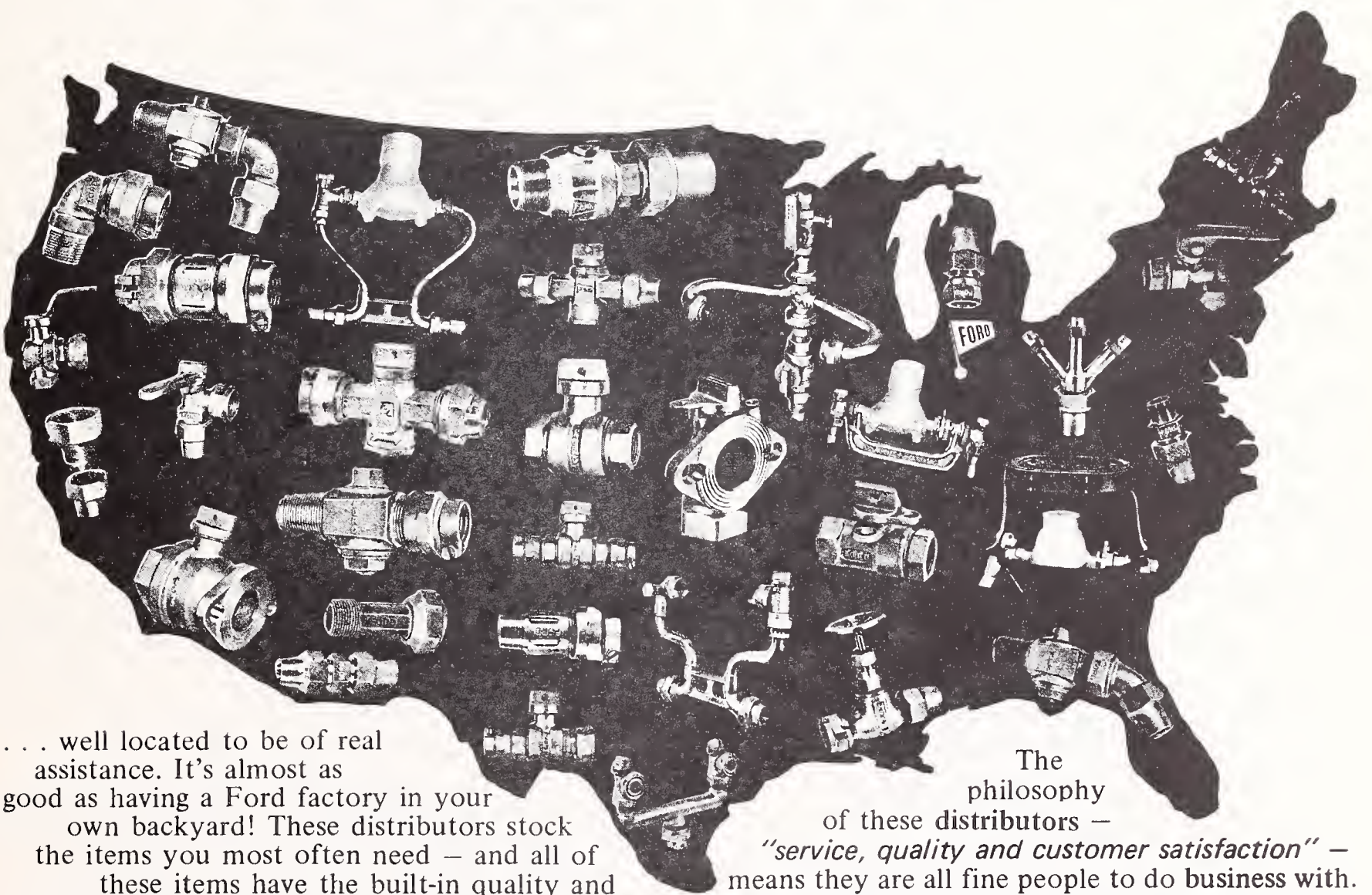


The objectives of the BIG SKY CLEARWATER shall be the publication of organizational news, the knowledge of design, construction, operation and management of water and wastewater facilities, and the interchange of experience and information relative to the operation of water and wastewater facilities.



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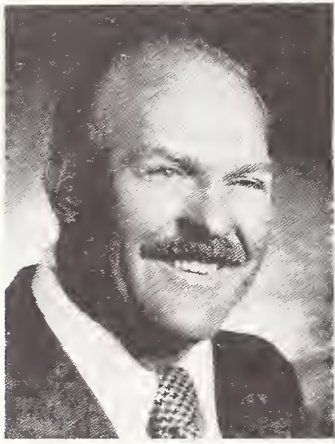
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PRESIDENT'S MESSAGE, MWPCA

The Montana Water Pollution Control Association covers a vast area of some 147,138 square miles. Our area is the fourth largest state in the Union, containing approximately 1402 square miles of inland water, much of which is of "Blue Ribbon" quality.

The future quality in store for this area depends, to a large degree, upon the work, skill, and dedication of the members of this Association. This is why I wish that time would have permitted my meeting and visiting each of you across Montana during my year as President.

During this year I have discovered that the MWPCA not only covers a large area of land, but also includes a tremendous area of talent, dedication, and involvement by its members. Many who, like the "Jefferson Award" winners, accomplish their tasks without fan-fare or notoriety. In a lot of cases communities are unaware of the efforts being made daily on their behalf.

We regret the passing of Lou Garske, Great Falls, Secretary-Treasurer of our Association. Lou will long be remembered as an active and dedicated member.

I am proud to have served as President this year for the Montana WPCA and only regret that this year has passed so quickly.

Bill Pasco
President, MWPCA

Note to all members: PLEASE SUPPORT the various MSAWWA-MWPCA committees and the officers of the two associations. Their work is essential for a successful organization.

MONTANA WPCA OFFICERS

President

William E. Pasco, Superintendent
Metro Wastewater Treatment Plant
Butte, Montana

President-Elect

Robert Haverfield, Superintendent
Sewer Facilities
Missoula, Montana

Vice President

Larry W. Larson
Morrison-Maierle, Inc.
Billings, Montana

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Northern Montana College
Havre, Montana

Rod James
Butte, Montana

Secretary-Treasurer

Vacant

Federation Director

Kenneth Johnston
Avon, Montana

MWPCA COMMITTEE CHAIRMEN, 1978 to 1979

Awards.....Roger Reich
Constitution and Bylaws.....Don Willems
Membership.....Ken Johnston
Industrial.....Rod James

IMPORTANT MEETINGS

54th Joint Conference -- MSAWWA and MWPCA,
March 29 and 30, 1979, Village Motor Inn
(Edgewater Motel), Missoula, Montana

99th Annual Conference -- AWWA, June 24 to
June 29, 1979, San Francisco, California

100th Annual Conference--AWWA, June 22 to
June 27, 1980, Atlanta, Georgia

52nd Annual Conference -- WPCF, October 7
to October 11, 1979, Astrohall, Houston,
Texas

53rd Annual Conference--WPCF, in October,
1980, Las Vegas Convention Center, Las Ve-
gas, Nevada



CHAIRMAN'S MESSAGE, MSAWWA

I have just been reviewing the Bylaws for the Montana Section, American Water Works Association. Article II reads as follows: "As a section of the American Water Works Association, the objectives are to further the dissemination of information and the advancement of knowledge in the area of design, construction, and operation and management of utilities rendering water service to the public, and to further the study, experimentation and research, and the publication of the results thereof in the areas of water distribution, water purification, conservation and development of water resources, and water utility management, together with the usual related activities of a scientific and educational society. All with the aim of improving water service to the public." After reading over this statement, I have decided that I am a very proud person to be the chairman of a group with objectives like these.

John Morrison, Sr. has been nominated by the Board of Directors of the Montana Section to fill the office of National Association Vice President. We wish John well in his campaign for this office.

I would like to stress our "Every Member Get A Member" campaign. Mike Patterson has been doing great as the Membership Committee Chairman, so let's support him by signing up a new member.

Committee Chairmen, remember our annual meeting in Missoula at the Village Inn on March 29th and 30th. Have your committee reports ready, please. I understand from the Host City Committee that our registration fees will probably be raised for this year. I feel that this is unfortunate, but I guess inflation has caught up to us also.

Howard L. Smith
Chairman,MSAWWA

MONTANA SECTION, AWWA OFFICERS

Chairman

Howard L. Smith, Superintendent
Water and Wastewater Facilities
Poplar, Montana

Chairman-Elect

Richard Nisbet
Director of Public Utilities
Helena, Montana

Vice Chairman

Ken Beven
Utilities Superintendent
Laurel, Montana

Trustees

Robert Sanks
Montana State University
Bozeman, Montana

Gary Mannix
Butte, Montana

Secretary-Treasurer

Ralph Dunahoo
Missoula, Montana

International Director

Miles Tuttle
Divide, Montana

MSAWWA COMMITTEE CHAIRMEN, 1978 to 1979

Honors and Awards.....Don Willems
Constitution and Bylaws.....Clay Brinck
Membership.....Mike Patterson
Safe Drinking Water.....Art Clarkson
Community Relations and
Advancement.....Richard Nisbet

AD HOC COMMITTEE

Operator Scholarship.....Art Clarkson

MSAWWA-MWPCA JOINT COMMITTEE CHAIRMEN

Auditing.....Richard Nisbet
Education.....Howard Peavey
Martha Anne Dow
Meeting Place.....Miles Tuttle
Program.....Art Clarkson
Richard Nisbet
Safety.....Gary Mannix
Robert Haverfield

MONTANA AWWA AND MONTANA WPCA ANNUAL MEETING
Village Motor Inn--Missoula, Montana

TENTATIVE PROGRAM

Thursday, March 29, 1979

8:00 AM-----Registration

9:00 AM-----Call to Order--William E. Pasco, President, MWPCA

Invocation, Welcome, and Response

9:45 AM-----Break

10:00 AM-----Business Meeting

11:00 AM-----Dan D. Water, Strong on Safety, Tom Decker, Black and Veatch, Kansas
City, Missouri

12:00 PM-----Luncheon: WPCF Report--Geoffrey Scott, President-Elect, MCPCF, and
Kenneth Johnston, Director, MWPCA

CONCURRENT SESSIONS

Technical

Operators

1:30 PM---Water Conservation Panel-----Sewers Preventative Maintenance, Elmer
Meters: Cecil Fauver, Neptune Meter Company Cole, Helena
Leak Detection: Dean Wheadon, Community Consultants, Inc.
General Benefits: Open Discussion
with the EPA

2:15 PM-----Fire Hydrant and Valve Maintenance,
Dick Seevers, Mueller Company

3:00 PM---Break-----Break

3:15 PM---Sludge Disposal Panel-----Hydrants and Meter Mains (continued)
Butte--Land Applications
Billings--Heat Treating
Havre--Lagoon
Missoula--Composting

4:00 PM-----W & WW Operators Certification Program,
Board Members

5:00 PM---Adjourn-----Adjourn

Friday, March 30, 1979

9:00 AM---Sewer Rates, Public Service Commission--Safe Handling of Chlorine, Chuck Emory,
Amerigas Company

9:45 AM---Break-----Break

10:00 AM---Use of Ozone, Chlorine Dioxide, and-----Aerated Lagoon Maintenance
Chlorine in Water and Wastewater
Treatment Plants

Tentative program continued on the next page

TENTATIVE PROGRAM

Friday, March 30, 1979 (continued)

Technical

Operators

11:00 AM---Underground Injection Control Program---Elevated Tank Maintenance, Jack Anderson
Fred Shewman, Darrel Dunn, Bill Engle

12:00 PM-----Luncheon: AWWA Report--Curt Stanton, President, AWWA, and
Miles Tuttle, Director, MSAWWA

1:30 PM---Water Rights Versus City Water Use-----Water and Sewer System Problems, DHES
Laurence Siroky, DNRC, Helena Staff, Helena

2:15 PM---Industrial Waste Problems, Rodney-----Pump Maintenance, Don Vry, President,
James, Montana Tech., Butte Layne-Minnesota Company

3:00 PM---Break-----Break

3:15 PM-----Business Meeting

5:00 PM-----Adjourn

A SPECIAL INVITATION

The Host City Committee extends a cordial invitation to all members and potential members plus interested parties to attend the yearly convention of the MWPCA and the MSAWWA to be held here in Missoula on March 29 and 30 at the Village Red Lion Motor Inn. Meeting headquarters are situated on the banks of the Clark Fork River at 100 East Madison, directly across the river from the University of Montana.

The governing body of the City extends every courtesy that is due you as a convention delegate, and those of us responsible for the local arrangements are doing and will do everything possible to make your visit here a memorable one. Remember to come to the 1979 Conference, and by all means, participate; let us learn from each other. The exchange of ideas at these proceedings does make our profession easier to cope with.

Robert A. Haverfield
Chairman, Host City Committee

P.S.: Wives of the MWPCA and the MSAWWA members here in Missoula are also looking forward to the March Conference. We feel that convention time is a special few days

to be with our husbands, and also to have a little time to ourselves, to visit new places, to add a little culture, or just to sleep in and polish our nails. We want to make your Missoula trip great this year and are making plans to that end. Be sure to bring your party dresses, your dancing shoes, and your friendly selves. See you in March!

PROMOTIONS FILL TOP TWO AWWA STAFF JOBS

Two top staff positions in the AWWA changed hands on January 1, 1979. David B. Preston, 53, became executive director of the association, succeeding Eric F. Johnson, while Paul A. Schulte, 44, was named as deputy executive director.

Preston, who joined the AWWA staff in 1960 as assistant secretary, was appointed assistant executive director in 1967 and deputy executive director in 1976. He has been an Active member since 1953. Schulte joined the main staff when it moved from New York City to Denver in 1974. He was named director of technical services in 1977. He was senior sanitary engineer with the New York Department of Health before moving to Denver.

Invitation continued on the next column

WPCF REPRESENTATIVE
Mr. Geoffrey T. G. Scott

Mr. Scott studied civil engineering at the City and Guilds College, London University, England and graduated in 1943 with a B.Sc.(Eng) Lond. and A.C.G.I. After three years service in the Armed Forces he returned to college for a years postgraduate study at the conclusion of which he received his D.I.C.

He was initially employed by Sandford Fawcett and Partners, Consulting Engineers in London, England, by whom he was sent to Canada in 1953 to assist in the establishment of the newly formed firm of Canadian-British Engineering Consultants. From that time until his retirement from the firm in 1976, his responsibilities covered a wide variety of engineering and administrative functions, including President of Canadian-British Engineering Consultants Limited (1971) and Chairman of the Board of Canadian-British Consulting Group.

His experience has been mainly in the field of Environmental Engineering, and has included water supply and pollution control projects, and work in connection with solid waste management and resource recovery.

He is a Registered Professional Engineer in the Provinces of Ontario and Nova Scotia, and is Designated as a Consulting Engineer in the Province of Ontario. Mr. Scott is a member of The Institution of Civil Engineers (U.K.), Engineering Institute of Canada, American Society of Civil Engineers, American Public Works Association, American Water Works Association, Association of Consulting Engineers of Canada (Chairman, Ontario Chapter 1971 to 1973), Consulting Engineers of Ontario (Director 1975 to 1977), Water Pollution Control Federation (Director 1973 to 1975), Conservation Council of Ontario, and Pollution Control Association of Ontario.

He was awarded the Arthur Sidney Bedell Award by the Water Pollution Control Federation in 1975, and was elected a Diplomat of the American Academy of Environmental Engineers in 1976.



AWWA REPRESENTATIVE
Mr. Curtis H. Stanton, President

Mr. Stanton is executive vice president and general manager of the Orlando Utilities Commission, Orlando, Florida. He joined the American Water Works Association in 1947, the same year he was named assistant general manager of the Orlando Utilities Commission. In mid-1948, at age 29, he became general manager.

Mr. Stanton has served as vice chairman, chairman and director of the Florida Section of AWWA. He was voted its Man of the Year Award in 1969. Active in section programs and committees since joining, he also has served on the AWWA Governmental Affairs Committee (1969 to 1970) and its Executive Committee (1971 to 1972).

Mr. Stanton is a graduate of the University of Florida (1940), receiving a Bachelor of Mechanical Engineering degree with High Honors. He is a member of the American Society of Mechanical Engineers and of the Institute of Electrical and Electronic Engineers. He is past chairman of the Florida Electric Power Coordinating Group, past president of the Florida Municipal Utilities Association and the Florida Industries Exposition, as well as a past director of the Central Florida Development Committee and past president of the Orlando Area Chamber of Commerce.

As AWWA's president, Mr. Stanton will travel widely, attending section and committee business meetings. He will participate in interviews on radio, television, newspapers and magazines.

Mr. Stanton was born in Key West, Florida. He is married to the former Claire Tillman, and they have three daughters.



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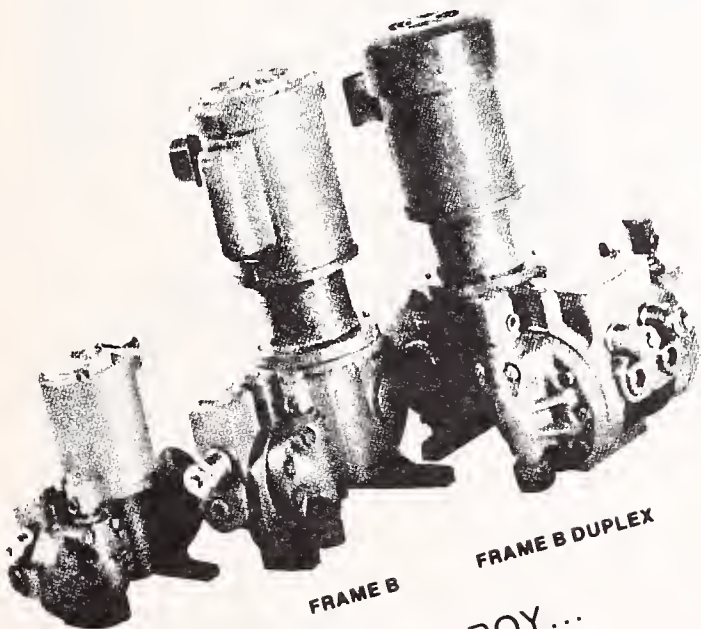
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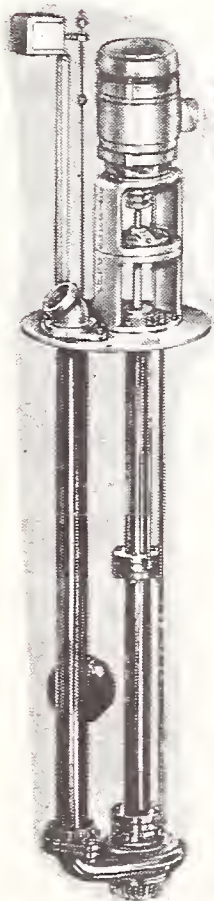
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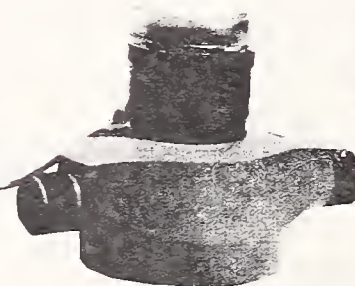
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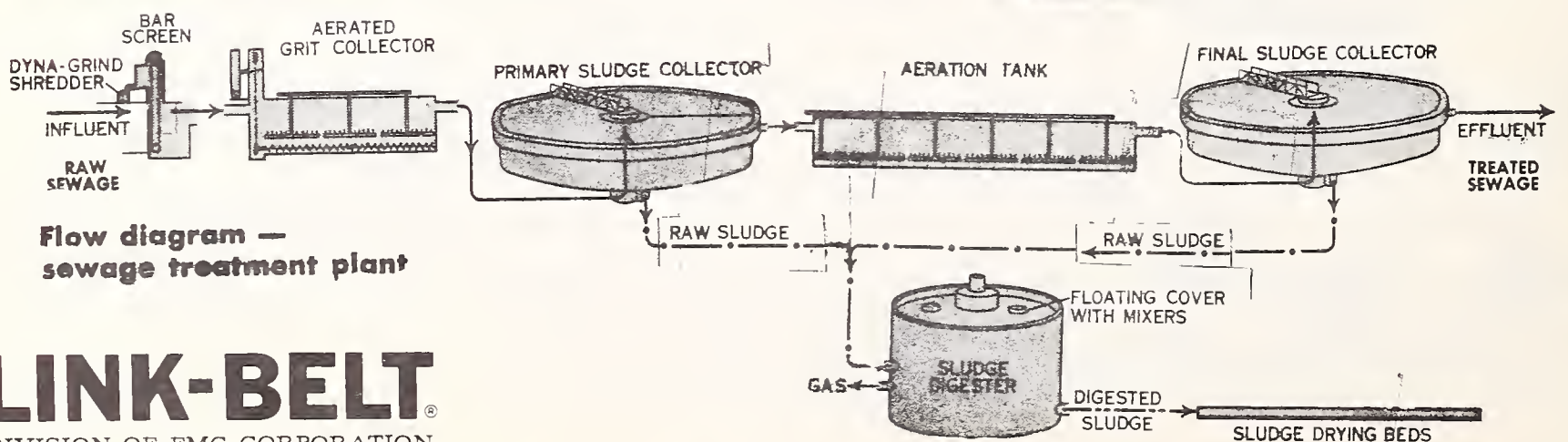
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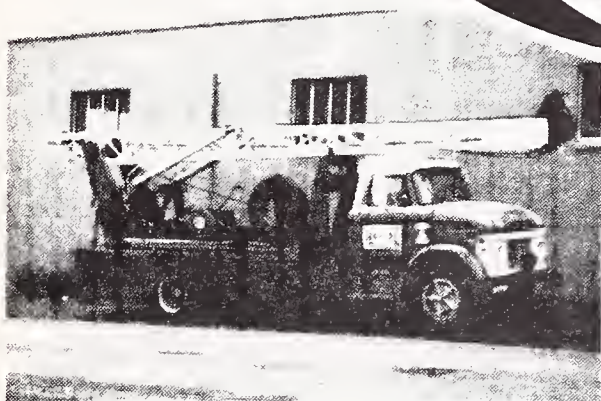
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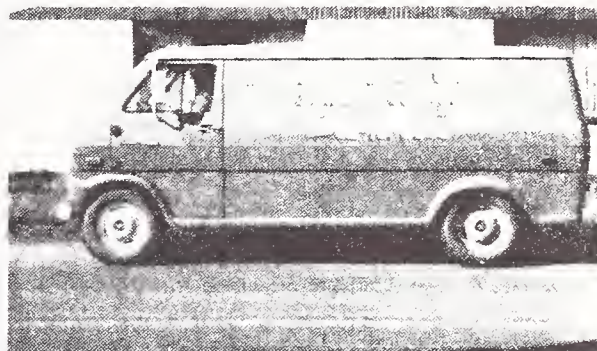
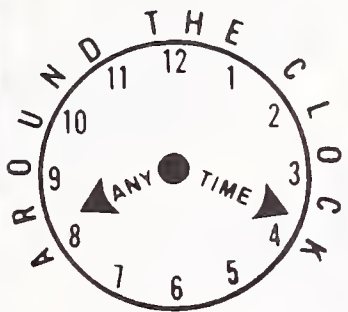
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Biologists for the Montana Fish & Game Dept. & the Anaconda Company weighing, measuring and tagging brown trout from the Clark Fork River near Warm Springs.

CLARK FORK RIVER

Last fall, the Montana Fish and Game Department conducted an electro-shock survey on the upper reaches of the Clark Fork River immediately below the Anaconda Company settling ponds at Warm Springs.

The results of fish census demonstrated that a healthy and stable population of german brown trout has returned to this section of the river that was essentially dead a few years ago from an accumulation of industrial and municipal wastes.

Anaconda has won national recognition for water pollution control at its Butte Operations, but the return of trout to the Clark Fork is the best and most gratifying evidence of the success of these programs.



MSAWWA INTERNATIONAL DIRECTOR'S REPORT

As I look out the window on this last day of December, 1978, with all the snow and below zero temperature, it seems a long way until the end of March and our Conference in Missoula, but it will be here before we know it.

Our International representative for this year will be President Curt Stanton who is the executive vice president and general manager of the Orlando Utilities Commission, Orlando, Florida. Hopefully he will be accompanied by his wife, Claire. Curt belongs to many societies and serves on many committees, and he knows more about the water business than many of us will ever hope to learn. He should be able to answer most of the questions that we can throw his way. Curt is tough but one heck of a nice guy, and I am sure that you will all like him. So let's show him a good time and a good meeting.

EMGM (Every Member Get A Member) is still one of our big themes. Mike Patterson has done a good job so far, but I would like to take this opportunity to ask every member to get behind his recruiting efforts and get your new member. LET'S PUT THE MONTANA SECTION OVER THE TOP DURING THIS YEAR. You could also win some money by getting your name in the pot before, or at, the spring meeting.

There will be many things to report at the March Conference that will be decided at our Board of Directors meeting in February at Monterrey, Mexico. I could fill you in on some of them, now, but space is limited, so I will tell you about them in March.

Miles E. Tuttle
International Director, MSAWWA

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MWPCA NATIONAL DIRECTOR'S REPORT

This year of 1978-1979 is a year of critical self-study for the WPCF. For several years a select committee under the guidance of Chairman George Simpson has been evaluating the organization and effectiveness of all phases of the Water Pollution Control Federation. A report from the Committee was presented to the Board of Control at its meeting in Anaheim in October 1978. The report is so comprehensive that no action was taken on its contents at that time, but a special Board of Control meeting was scheduled for March 19, 1979 for the sole purpose of consideration of the many aspects of the report. Your Director and Officers of the Montana Association are studying the proposals and filing statements concerning the recommendations of the Simpson report with the view of how such recommendations effect the MWPCA.

To describe all of the contents of the report would be much too lengthy for this writing, but here are some of the items that directly concern us:

- * Should the WPCF remain an organization of organizations, or should it be changed to the form of a national organization with chapters similar to the AWWA?
- * Should Member Associations to the WPCF be represented according to membership size, or should the present system of one Director for small associations of less than 500 members and two Directors for associations of more than 500 members continue?
- * Should a Director be limited to a term of three years?
- * Should the Board of Control hold mid-year meetings in addition to the meetings at the Conference?

As a representative of a small association to the WPCF, my view on these subjects is that: we should keep the present style of organization; that there should be no additional representation from the large associations; that Directors are officers elected by the local associations and the WPCF should not restrict the election of local officers; that the Board of Control should not hold mid-year meetings because of the expense to the Member Asso-

Continued on page 16

Environmental

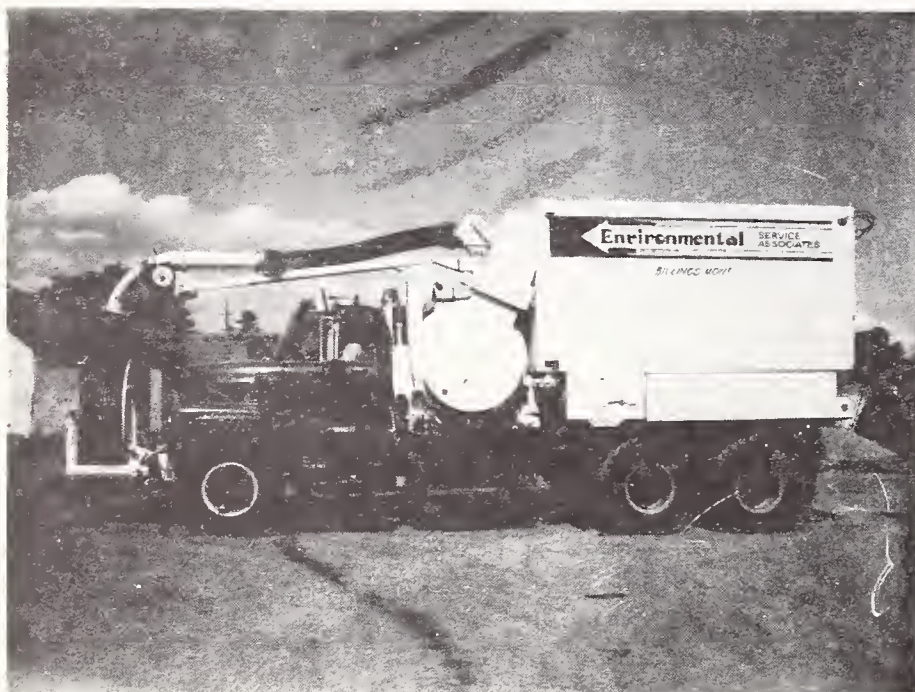
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Committees continued from page 4

Cobleigh.....William Hunt
Host City.....Robert Haverfield
Government Affairs.....Art Clarkson
Nominating.....John Voelker
Publications.....Duane Klarich
Technical Papers.....Roger Poerce
Robert Sanks
Heroism.....Robert Haverfield
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Operator Certification.....Wayne Young
Resolutions.....Wayne Young

Director's report continued from page 12

ciations, but they should increase Board meeting time during the annual Conference.

Other questions to be considered at the special mid-year meeting in Washington, D.C. in March include possible revisions to the organization of national committees, the handling of the national Conference, and other matters concerning the operations of the WPCF.

A regional meeting with the Pacific Northwest association, the Alaskan Association, and the British Columbia Association will be held in Vancouver, B.C. on March 9-10 with the BCWPCA as host. Several MWPCA officers plan to attend this very informative meeting, and any MWPCA members are welcome to attend.

I will have additional reports to make at the MWPCA Conference on March 29-30. See you at Missoula!

Kenneth Johnston
Federation Director, MWPCA

Greater Missoula is served by a water system owned and operated by The Montana Power Company. Numerous residences and businesses in outlying areas obtain their water from individual wells, and a large newly developed area in South Missoula is served by The Western Water Company.

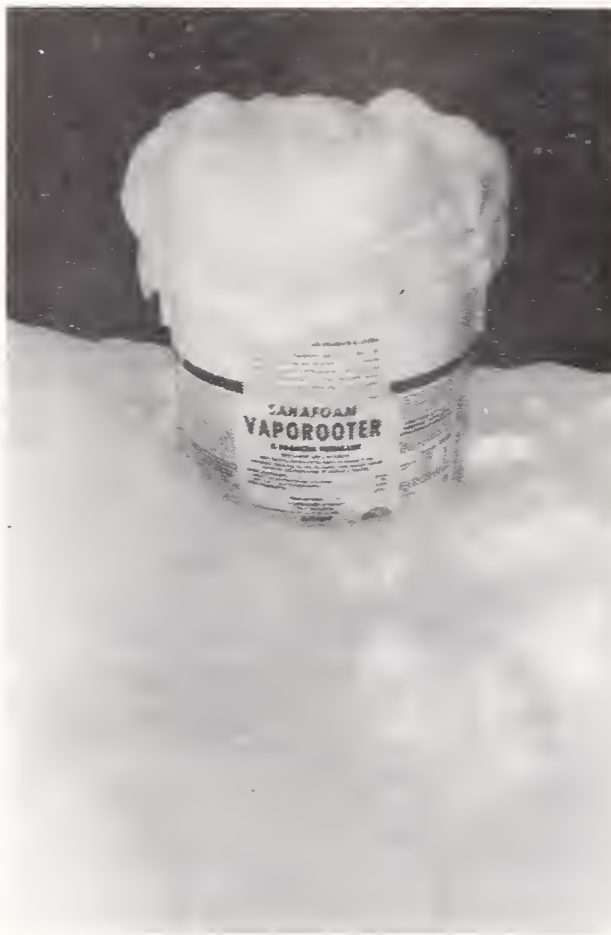
The Montana Power Company utilizes both surface and ground water as its source of supply for its 16,000 customers. Rattlesnake Creek was the primary source of supply for many years, but as the demand increased wells were developed, and ground water now comprises approximately 55% of the total yearly demand. Thirty turbine well pumps are now in operation, varying in size from 25 to 300 horsepower.

During periods of high turbidity, the surface water does not comply with the Federal Safe Drinking Water Act of 1974. The gravity system has been modified to provide for automatic shutdown under this condition. This results in a total ground water supplied system until such time as the surface water is again in compliance with the law.

There are several hillside developments in Missoula, and these areas are supplied by booster pumping stations and small reservoirs. A new one-million gallon underground concrete storage tank was completed in 1977, and a three-million gallon facility is under construction at the present time as illustrated on the cover of this bulletin. Additional wells, reservoirs, and pipelines are being considered in order to provide for future city growth.

MAILING LIST NOTE

Anyone who is not now receiving the Big Sky Clearwater but would like to be placed on the mailing list for this important bulletin, please forward your name, address, city, state, and zip code to Ms. Janet Kocab, Water Quality Bureau, Montana Department of Health and Environmental Sciences, Helena, Montana 59601. Be sure to specify your interest in the Big Sky Clearwater.



“Lather that doesn’t need a blade” Shaves sewer maintenance costs.

About a decade ago, botanists at the University of California noticed that cutting roots, like pruning trees, promoted finer and faster growth. Big metropolitan areas like Los Angeles City and County, Sacramento City and County and St. Petersburg, Florida already suspected that. They had been hacking away at sewer roots for years and their problems just kept growing faster.

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All of this isn't a pipe dream. It is one of the best documented stories in the sewer maintenance field.

You can read about it in the EPA series (600/2-77-017) issued last December... or in Neal Townley's report from Sacramento County in 1973... or in the detailed studies done by Dr. O. H. Leonard and Dr. John F. Aherns way back in 1969 at the University of California at Davis... or even in the Buffalo News article written May 28 by a reporter John Sinclair. That's the article which calls *Vaporooter* “the lather that doesn't need a blade.”

John came up with a catchy phrase there—one that tells the story.

For more information and documentation than you can probably handle, write to:

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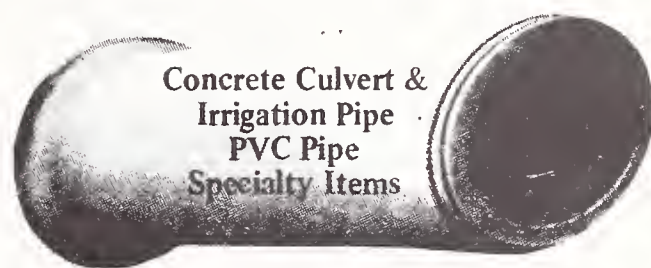
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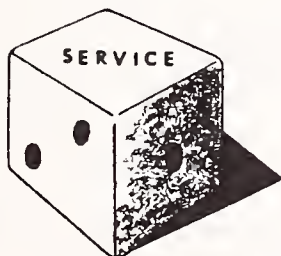
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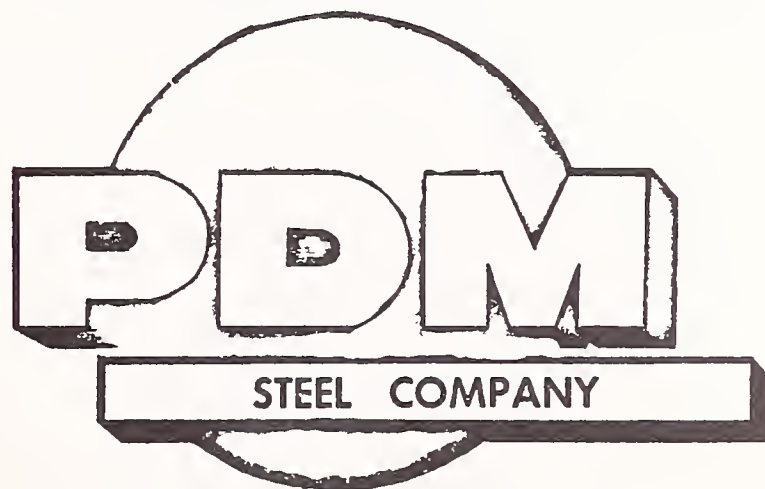
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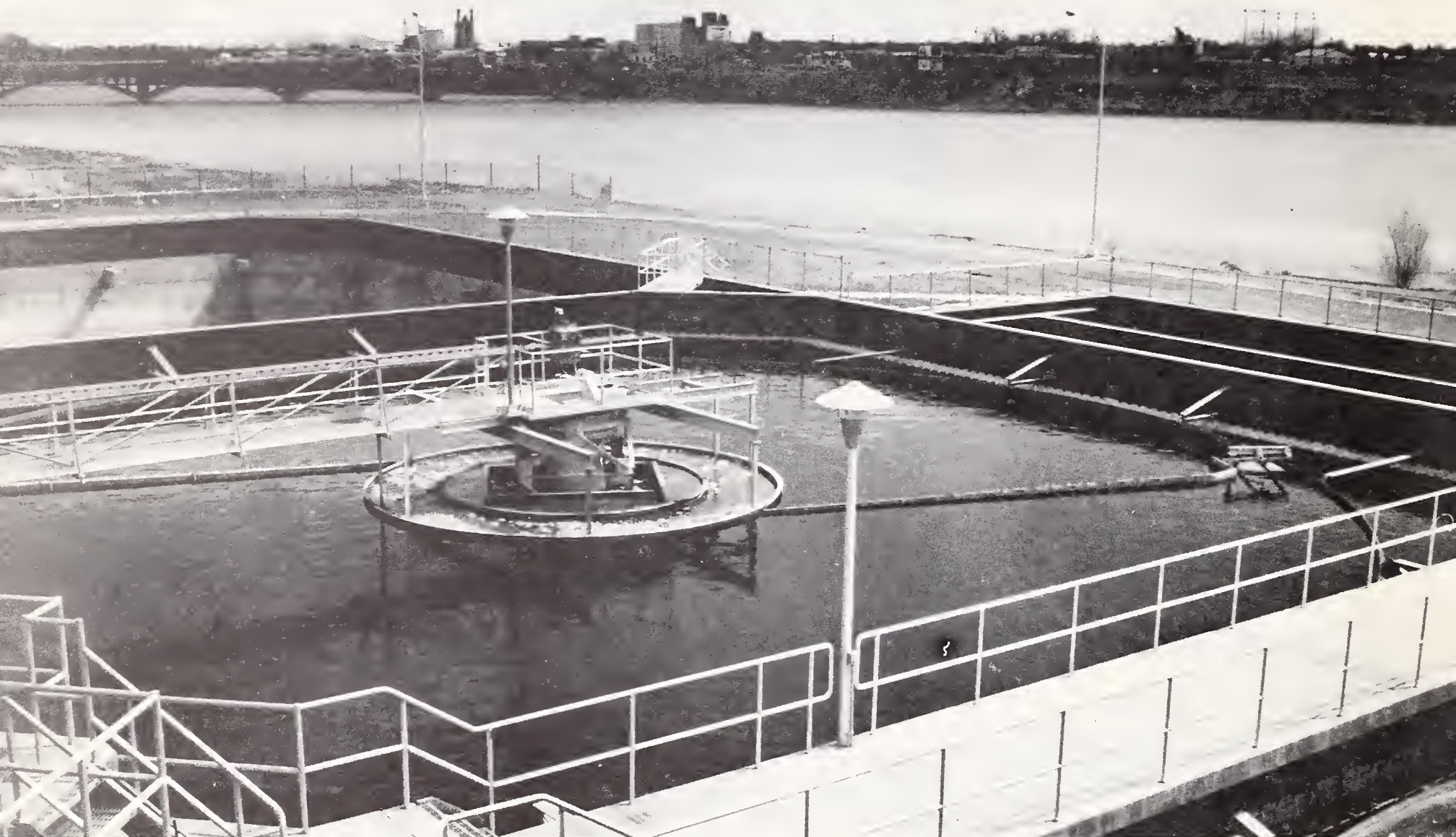
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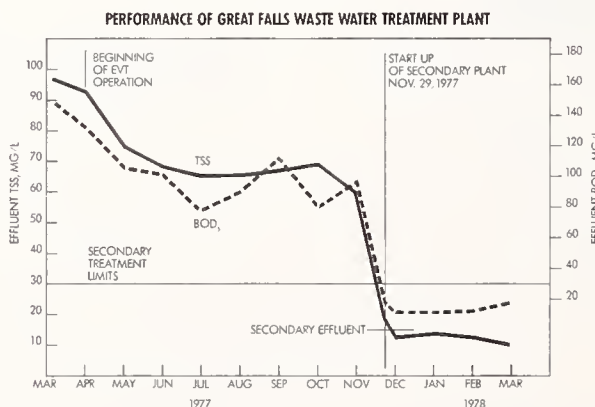
The arrangement frees the city of Great Falls from personnel problems, paperwork, special funding for training, and costly replacement and repair responsibilities. The taxpayers not only

save money, they have the assurance that they won't have to pay fines.

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Envirotech, Great Falls saved \$35,000 in the contract's first month alone. And, the plant was brought up to environmental water quality standards on the first day—in itself an almost unheard of performance.

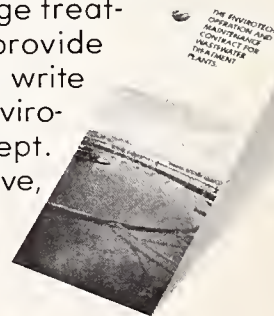
Could Envirotech work out an equally innovative and worry-free program for your town? Call us and let's talk about how the largest manufacturer in the sewage treatment business can provide services for you. Or, write for our brochure: Envirotech Corporation, Dept. EOS-10, One Davis Drive, Belmont, CA 94002. (415) 592-4060.



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FALSIFYING MONITORING REPORTS

On September 16, 1977, the former superintendent of the Little Rock, Arkansas, wastewater treatment plant was indicted by a Federal Grand Jury on five criminal counts of falsifying monthly operating plant performance reports required by EPA. During the court proceedings, the superintendent testified that the reports were falsified because the plant's equipment was not functioning properly. He also added in his defense that plant employees had inadequate time to correct the equipment malfunctions.

According to the January 19, 1978, decision of the District Court for the Eastern District of Arkansas, an agency chartered by a municipality to operate its wastewater treatment system can be held criminally liable for falsified information submitted to EPA. Similarly, the same court had said that ANY individual who knowingly falsifies a wastewater treatment plant performance report is criminally liable for submitting inaccurate information to a federal agency.

Operations personnel and management like any other public service group are expected to conform to a professional code of ethics. Any responsible individual(s) who has accurately reported operation conditions not in compliance with the NPDES permit cannot be held liable in a civil suit against the facility. Meeting the permit requirements is the responsibility of the facility owner, not the individual. FALSIFICATION of reports, however, is a criminal offense that can lead to the prosecution of BOTH the responsible individual(s) and municipal agency (facility owner). Source: Journal WPCF, Sept., 1978.

WATER REUSE SYMPOSIUM

A Water Reuse Symposium will be held March 25 to 30, 1979, in Washington, D.C., under the direction and sponsorship of the American Water Works Association Research Foundation, the Environmental Protection Agency, the Water Pollution Control Federation, and other federal entities. The important week-long meeting will be devoted to the renovation and reuse of wastewaters

Symposium continued on the next column

Symposium continued from previous column

from municipalities, industry, and agriculture.

With the theme of "Water Reuse--From Research to Application," pertinent case histories, new water recycling research and practical community applications will be covered. Plenary, concurrent sessions, and poster presentations will emphasize innovative approaches, treatment research and development, health-effects studies, monitoring and control, criteria-standards development, institutional and legal problems, and national, state, regional, and local reuse policies. Technical tours through two important water recycling facilities will be available.

The program is directed to people from the water and wastewater utilities, consulting firms, regulatory agencies, research divisions of manufacturers and universities, and federal, state, and private research organizations. A preliminary program and registration form is available from: Water Reuse Symposium, AWWA Research Foundation, 6666 West Quincy Avenue, Denver, Colorado 80235 (Phone: 303-794-7711).



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NEW MEMBERS, MWPCA-WPCF

Individuals who have recently joined the MWPCA-WPCF can be listed as follows: David F. Brown, Great Falls; Phillip W. Butterfield, Lakewood, Colorado; John Castner, Great Falls; Barry Damschen, Helena; Victor C. Hanich, Great Falls; Fred Horne, Carmel, California; Mona Jamison, Helena; Duane Klarich, Billings; Kristi Kline, Billings; Robert Leidholt, Miles City; Robert Munroe, Denver, Colorado; Warren Myers, Salt Lake City, Utah; Charlene Teitzel, Chinook; Dwight Vadnais, Billings; Robert Vandel, Billings.

Anyone who has sent an application to Mr. Lou Garske for membership but has not been receiving the WPCF Journal should apprise Mr. Art Clarkson of the situation. Mr. Clarkson is associated with the Water Quality Bureau of the Montana Department of Health and Environmental Sciences in Helena, Montana 59601. Evidence of payment such as a cancelled check would be helpful in updating and confirming the records. Your prompt attention will be appreciated.

NEW MEMBERS, MSAWWA-AWWA

Welcome to new members of the Montana Section AWWA. The following have joined since April 1, 1978: Bill Glenn, Chinook; Bernard Glaeckert, Billings; Dan Lutt, Hardin; City of Whitefish; Tim Berry, Helena; Henry Preshinger, Fort Benton; Will Garvin, Helena; U.S. Public Health Service, Billings; Brady Water Users Association; Wilbur Wallace, Glendive; Bob Morrison, Bozeman; Rich Brown, Billings; Richmond Franklin, Great Falls; E.N. Wheeler, Sidney.

MSAWWA MEMBERSHIP CONTEST

Have you done a favor for a friend? How many of your friends in the waterworks field actually are members of the AWWA? So many advances are being made in this field, that one must have additional updates to deal with everyday problems. The AWWA sends several different journals and articles which can help members solve many of their day-to-day difficulties, so why not ask a friend to join the AWWA. You may in fact be doing them a favor.

Contest continued on the next column

Contest continued from the previous column

The Montana Section AWWA is vigorously engaged in our membership drive. Our goal for April, 1981, is 150 members. We are a little bit behind schedule, but our membership contest will give all of us more incentive to recruit a new member. The rules of this year's contest are basically the same as those for 1978, except for the changes in dates, so please refer to the 1978 issue of the Big Sky Clearwater for details. Date changes for the current contest are as follows: must be a paid-up member as of March 31, 1979 for eligibility with the contest rules effective from April 1, 1978 to March 1, 1979.

The contest drawing with \$150.00 in prizes will be held at the annual AWWA Montana Section meeting in Missoula (Banquet Night, March, 1979). WINNER OF THE FIRST PRIZE DRAWING MUST BE PRESENT, but the other drawing winners need not be present. The prizes are: 1st Prize Drawing--\$100.00, 2nd Prize Drawing--\$30.00, and 3rd Prize Drawing--\$20.00. In addition a \$10 discount will be given to anyone who joins the AWWA during the Annual Convention. So bring a friend and do them a service!!!

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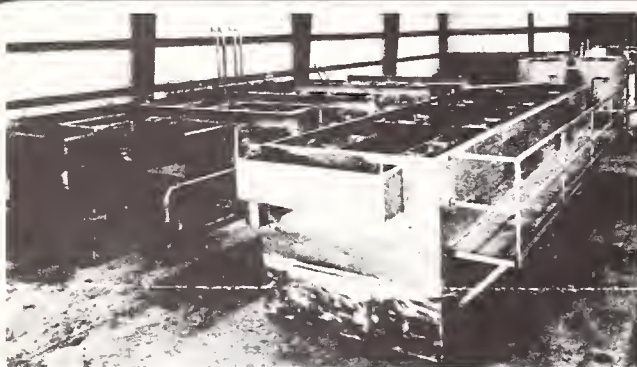
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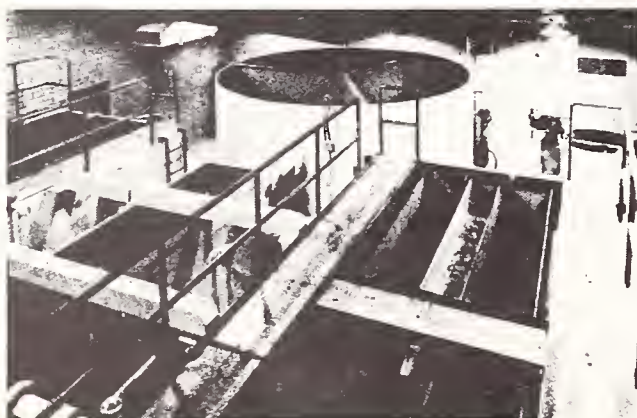
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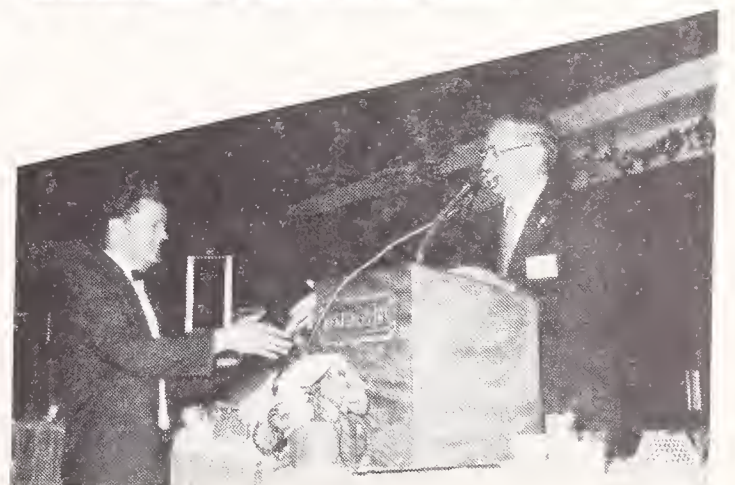
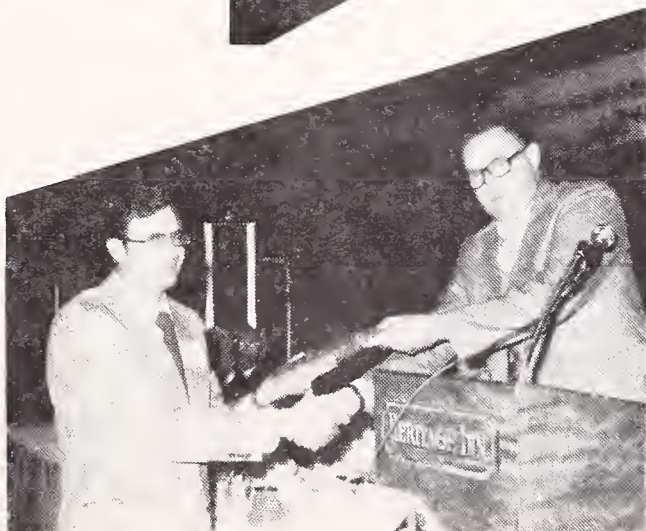
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NOTE: The registration fee for a non-member will be \$5.00 higher, which may be applied to the first years membership fee in either the WPCF (\$30.00) or the AWWA (\$32.50).

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WATER AND WASTEWATER EXAMINATION
RESULTS ANNOUNCED

Carl Lauterjung, Kalispell, Chairman, and Don Willems, Helena, Director, Montana Board of Certification for Water and Waste Water Operators, announced the certification of 56 persons as water and wastewater treatment plant operators. Those passing the examination which was given in Bozeman, Havre, Miles City, and Missoula are:

Class 1: Craig Barsness, Laurel; John Bleth, Colstrip; Jerry C. Burns, Bozeman; John W. Camden, Helena; Randolph Christoferson, Havre; Elmer Cole, Helena; Henry Elbrecht, Helena; Pat Ernst, Helena; Brian Ertman, Forsyth; Mark Everingham, Missoula; Nolan Fandrich, Colstrip; Terrance Fox, Kalispell; Tim Gordy, Havre; Lyle Griffiths, Helena; Craig Hertoghe, Billings; Kenneth Hoff, Glendive; Michael Holzwarth, Colstrip; Michael Kaleva, Havre; William A. Kemp, Libby; Kristine Jo Kline, Laurel; Jered Kuno, Great Falls; Doug Kurk, Bozeman; Chris Nelson, Havre; Kay Nelson, Helena; Keith Nelson, Great Falls; Christine Pelletier, Belgrade; Stephen Ruhd, Wolf Point; Earl Salley, Great Falls; Menford L. Sather, Larslan; Wayne Solum, Havre; Roger Sprague, Colstrip; Howard Smith, Poplar; Charlene Teitzel, Chinook; Richard Thomas, Belgrade; Vernon Waller, Laurel.

Class 2: Thomas Brennan, Red Lodge, and Kenneth Hoff, Glendive.

Class 3: Edwin Chamberlin, Livingston; Stuart Cooper, Manhattan; Dennis Diteman, Bozeman; Eldon Van Dyken, Manhattan; Vernon Peck, Great Falls; Richard Pitman, Fairmont Hot Springs; Wayne F. Reed, Big Timber; Menford L. Sather, Larslan.

Class 4: Jim Arndt, Great Falls; Nina Denzien, Clyde Park; Jerry Swenson, Belgrade; Warren Williamson, Kalispell.

Class 5: Peter Degel, Glendive; Roald Haaland, Inverness; Wart T. North, Plains; James Snider, Forsyth; M. D. Tweet, Glendive; Robert Tomsheck, Sunburst; G. W. Winkler, Great Falls.

The next examination is scheduled for Wednesday, March 28, 1979, from 1:00 PM until 5:00PM in the Clark Room of the Vil-

Exam results continued on the next column

SPRING TRAINING SEMINARS

The Water Quality Bureau of the Montana Department of Health and Environmental Sciences has scheduled several seminars to be presented in the spring.

A seminar on the Operation and Maintenance of the Oxidation Ditch will be held in Billings during the last part of April. It will be a three-day seminar, and the cost to attend has been tentatively set at \$50 per person. Maximum plant performance and hands-on demonstrations will be emphasized.

Cross-connection seminars are scheduled for Billings and Great Falls. Tentative dates are March 13 and March 15. The program will be presented by the Watts Regulator Company and will be for water, wastewater, and water distribution operators, and also for building and plumbing inspectors and for consulting engineers.

In April and May, one-day seminars for trailer park-campground operators will be given at several locations in the State. Certification tests for restricted licenses will be given following the seminars.

Information on other seminars and training courses will be posted at a later date.

Examination continued from previous column
lage Motor Inn at Missoula, Montana. Anyone interested in taking the examination should contact the Montana Board of Certification for Water and Waste Water Operators, Department of Health and Environmental Sciences, Helena, Montana.

* * * * *

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